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Evolution and consumer behavior

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An evolutionary theoretical approach considers the adaptive function of behavior. This article discusses what it means to use an evolutionary approach to generate predictions, and discusses two specific evolutionarily informed theories that have uncovered novel insights into consumer behavior. First, the fundamental motives framework highlights the social challenges faced by our ancestors (e.g., finding mates, avoiding disease) that continue to influence modern consumers in specific and often contradictory ways. Second, the ovulatory shift hypothesis highlights that women experience an increase in mating motivation near ovulation (e.g., increased desire to attract men and outcompete rival women) that has important implications for consumers. An evolution-informed approach can generate new insights about consumer behavior.

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Most people love to eat cake. But, why? One answer is because cake tastes good. This is a proximate explanation that concerns the trigger of a particular behavior. This explanation is important, but it does not address the deeper question of why cake tastes so good in the first place. Here's another answer. An attraction to the sight, smell, and taste of foods rich in sugars and fats helped motivate our ancestors to obtain calorie-dense foods and survive in an environment that was often scarce in calories [1]. Our ancestors who were highly attracted to fatty foods were more likely to obtain them, survive, and pass their taste for cake on to future generations. The result is that it is often hard for us modern day consumers to pass up molten lava chocolate cake regardless of our (ever expanding) waistlines. This is an ultimate explanation that concerns the *adaptive* function of a particular behavior: the general desire to eat more cake than vegetables is an adaptation. This kind of ultimate explanation is central to the study of consumer behavior from an evolutionary theoretical perspective.

An evolutionary approach dates back to Darwin's theory of natural selection [2]. Natural selection is the process by which biologically influenced characteristics become either more or less common in a population depending on how those characteristics affect an individual's reproductive fitness — the passing of genes on to future generations. Characteristics that enhanced reproductive fitness were passed on to the next generation, whereas those that impeded it were not. Natural selection therefore maintains particular characteristics because they have (or once had) fitness benefits. Natural selection produces characteristics that fall in one of the following categories:

- *Adaptations*: characteristics that reliably solved adaptive problems better than competing alternatives during evolutionary history (example: fear of poisonous snakes).
- *By-products*: artifacts without adaptive value that persist because they are inherently coupled with adaptations (example: fear of harmless snakes).
- *Noise*: variations in a given characteristic that are due to random environmental events or genetic mutations (example: most rare types of fears, such as fear of flowers).

Some scholars assume that a few human behaviors might be related to evolution, but that many others are probably unrelated to evolution. This assumption is false. The vast majority of behaviors *include* an evolutionary explanation that falls in one of the three categories above. Even learned behaviors that have a cultural component are not devoid of evolution. For example, even cultural differences in personality are often linked to evolutionarily crucial ecological circumstances such as disease prevalence in a given part of the world [3]. Likewise, any behaviors that are learned also include an evolutionary component because the apparatus doing the learning (the brain) is composed of evolved mechanisms [4–6].

Another misconception is that an evolutionary perspective relies on one single theory — evolutionary theory. This is also false. Instead, natural selection is a metatheory that encompasses hundreds of different theories such as the theory of reciprocal altruism, parental investment theory, kin selection, and many others [7,8]. These specific theories can suggest specific hypotheses about causal processes of behavior at the psychological level, as we discuss in detail later. Thus, an evolutionary approach

to the study of consumer behavior is an evolutionarily informed psychological investigation.

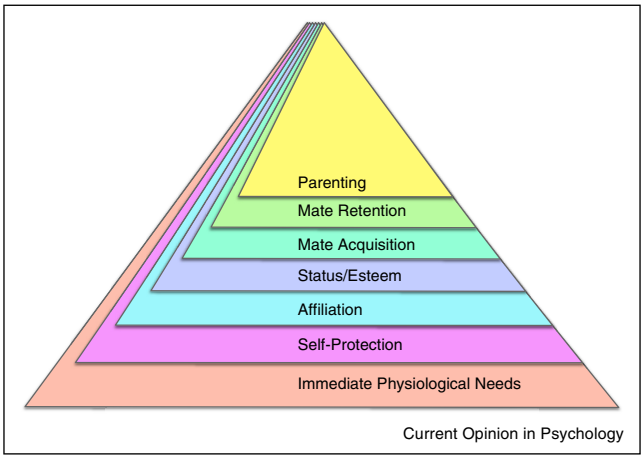
Considering theories of selection and the adaptive function of behavior provides deeper insight into the psychology behind consumer preferences and choice, which can lead to novel predictions that may not have been generated through any other lens ([7–11], see also [12]). In this review we describe two evolutionarily informed theories — the fundamental motives framework and the ovulatory shift hypothesis — and highlight recent findings generated from them that are particularly relevant to consumer behavior.

Fundamental motives framework

When people think about 'evolutionary success,' they may think only about survival and reproduction. Although these are important, there are a number of distinct evolutionary challenges that had to be surmounted to achieve reproductive success. Like all other animals, at a base level our ancestors needed nourishment and shelter. But because humans are intensely social animals, we also faced a set of central and recurrent social challenges [10–14,15••]. These fundamental ancestral challenges included: (1) evading physical harm, (2) avoiding disease, (3) making friends, (4) attaining status, (5) acquiring a mate, (6) keeping a mate, and (7) caring for family. See Figure 1.

The fundamental motives framework maintains that the specific ancestral social challenges faced by humans map onto fundamental motivational systems that function to help solve each challenge. Activating a particular fundamental motivational system produces a specific set of consequences for attention, memory, cognition, and preferences [15••,16,17]. This coordinated cascade of responses functions to solve the ultimate problem associated with the currently active system.

Figure 1



Hierarchy of fundamental human motives [13]. Note — once a motivational system has developed, its activation can be triggered in response to environmental cues indicating a threat or opportunity related to a specific evolutionary challenge.

A fundamental motive can be activated or primed by external or internal cues indicating threats or opportunities related to a specific evolutionary challenge [15••]. For example, the mate acquisition system can be activated by interacting with a desirable member of the opposite sex, being in the same room with such a person, being exposed to an image involving such a person, or merely imagining a desirable romantic encounter. Consistent with the fundamental motives framework, the activation of the mate acquisition system leads a person to prefer and seek products that facilitate achieving the ultimate need of acquiring a mate.

For men, acquiring a mate often means spending current resources in ways to attract the attention of the opposite sex. For example, two studies found that having men handle sexy lingerie or read a story about a surplus of men competing for women's attention activates the mate acquisition system, which in turn leads men to report an increased desire for immediate versus delayed monetary rewards [18•,19•]. Activating the mate-acquisition system can also erase loss aversion [20•]. In fact, for men, triggering the motive to attract a mate can cause this bias to reverse itself, leading gains to loom larger than losses. Similarly, photographs of attractive members of the opposite sex and imagining a romantic encounter with an attractive partner leads men to spend more on conspicuous luxury products [21,22].

What about women? Mate acquisition motives do not lead women to spend more on conspicuous luxury goods. And for good reason; flaunting a flashy designer handbag has rarely been an effective way to attract a man. Yet, we know that women spend a lot of money on conspicuous luxury goods. This opens up the possibility that a different fundamental motive may underlie women's conspicuous consumption. In a quest to find an answer to this puzzle, a series of studies activated in women the *mate retention* system (i.e., a motive to guard a partner from rivals who want to steal him). When this system was activated, women had an increased desire to acquire luxury goods [23•]. This finding suggests that women may use luxury products to signal status and intimidate other women.

An important implication of the fundamental motives framework is that the same person might make different — and sometimes entirely inconsistent — choices depending on which fundamental motive is currently active, as is the case for women when the mate acquisition versus mate retention system is activated. This is because what constitutes adaptive behavior to further